

Title: Studying Free Dance Movement to Music

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Abstract

Aims and Objectives

In this paper we present results from an observational study of free dance movement to music.

Context

Dance movements serve a primarily semiotic function [1] and may encode information about the neuro-cognitive structures of music perception [2]. Also, the study of people's sound-accompanying or "mimicking" gestures [3] is expected to uncover aspects of our mental representation of gesture-sound relationships as well as the more general perception of sound.

Methodology

Three students of modern dance were asked to move freely to five excerpts of non-tonal acoustic music. The musical excerpts were each repeated three times so as to allow for studying how the dancers developed their movement over time. The excerpts were chosen to not have a salient pulse, thereby minimizing the influence of rhythm on resulting gestures.

We performed quantitative and qualitative analysis of the video material obtained at the recording sessions using the *Musical Gestures Toolbox*, a set of tools for the Max/MSP/Jitter environment that allows for integrated audio and video analysis [4].

Results

Results show that the different dancers tend to make gestures with many qualities that resemble the sound-producing gestures (with acoustic instruments) when the identity of the instrumentation is evident in the sound. Correlations of low-level features indicated a general correspondence between the amplitudes of the spectral centroid and gestural features.

Key Contributions

Results from this preliminary study suggest that improvised dance movements may share common characteristics from instrumental playing. Also, preliminary results suggest that further analysis into gestural and spectral relationships may prove fruitful. In general, this research is oriented towards a fuller understanding of the gestural modality by exploring its higher-level features and its relationship with sound.

Keywords

gestures, dance, improvisation, gestural analysis

References

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